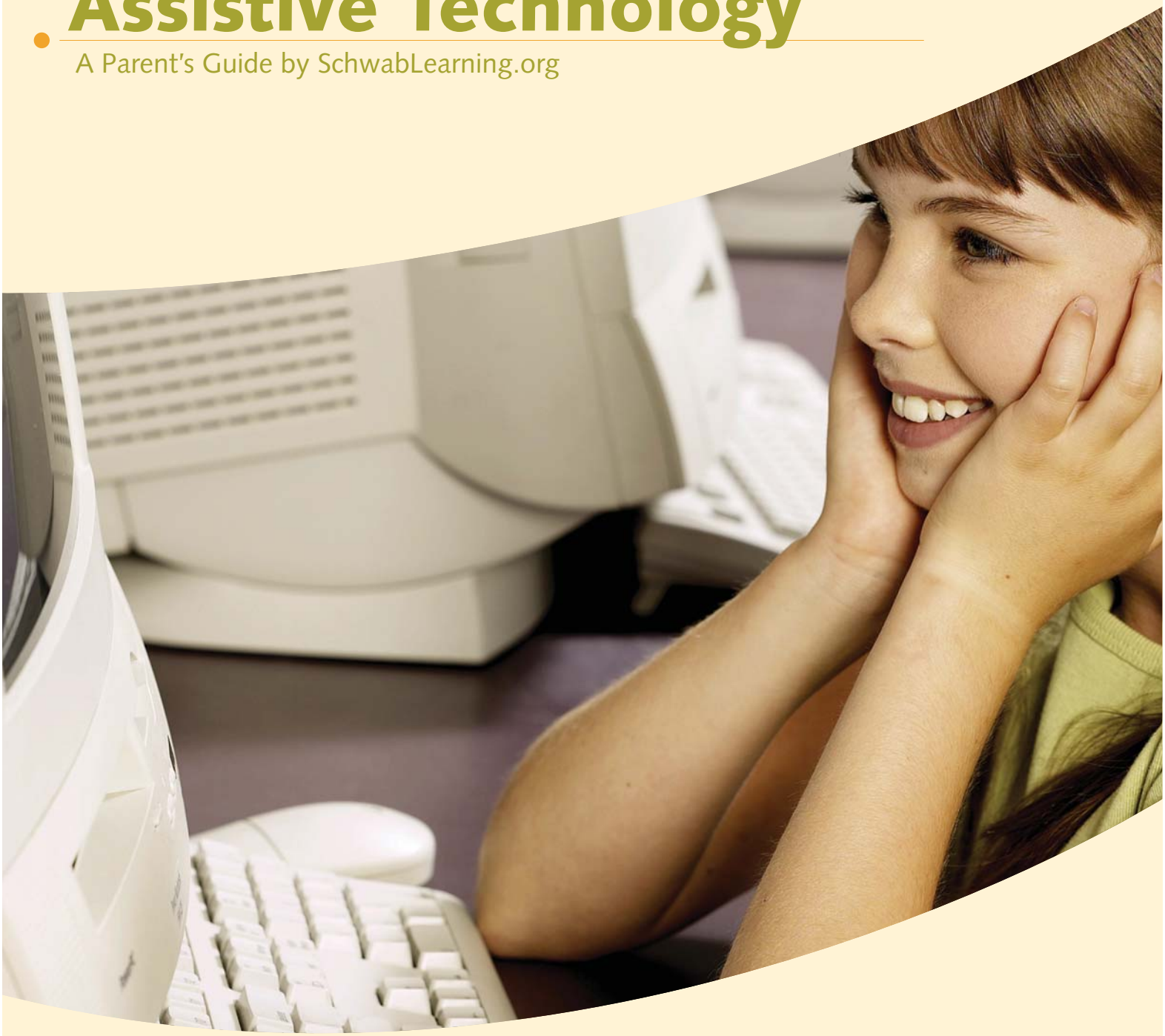
e-ssential Guide

Assistive Technology

A Parent's Guide by SchwabLearning.org



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A Parent's Guide to Helping Kids with Learning Difficulties

SchwabLearning.org
A Parent's Guide to Helping Kids With Learning Difficulties

e-ssential Guide

Assistive Technology

A Parent's Guide by SchwabLearning.org

Our *E-ssential Guide to Assistive Technology* explains the purpose and potential of technology to help individuals with learning disabilities. This collection of articles and a worksheet will start you on the path to finding assistive technology (AT) tools to help your child bypass learning difficulties while playing to her strengths. You'll also find a list of suggested resources on this topic.

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A Parent's Guide to Assistive Technology

Assistive Technology for Kids with Learning Disabilities — An Overview

Assistive technology (AT) is available to help individuals with many types of disabilities — from cognitive problems to physical impairment. This article will focus specifically on AT for individuals with learning disabilities (LD).

The use of technology to enhance learning is an effective approach for many children. Additionally, students with LD often experience greater success when they are allowed to use their **abilities** (strengths) to work around their **disabilities** (challenges). Assistive technology tools combine the best of both of these practices.

This article will introduce parents to the role of AT in helping their children with LD. The better informed you are about AT the greater the chances are that your child will experience success in school, recreation, and eventually, at work. You will also want to learn how to choose AT tools that are reliable and how to select technology that is tailored to your child's individual needs, abilities, and experience.

> "For people without disabilities, technology makes things easier. For people with disabilities, technology makes things possible."
>
> *— International Business Machines (IBM) 1991 training manual*

What Is Assistive Technology for LD?

Assistive technology for kids with LD is defined as any device, piece of equipment, or system that helps bypass, work around, or compensate for an individual's specific learning deficits. Over the last decade, a number of research studies have demonstrated the efficacy of assistive technology for individuals with learning disabilities.[1] AT doesn't cure or eliminate learning difficulties, but it can help your child reach her potential because it allows her to capitalize on her strengths and bypass areas of difficulty. For example, a student who struggles with reading but who has good listening skills might benefit from listening to books on tape.

In general, assistive technology **compensates** for a student's skills deficits or area(s) of challenge. However, utilizing AT does not mean that a child can't also receive **remedial** instruction. AT and remedial instruction are not mutually exclusive. In fact, research has shown that AT can serve to improve certain skill deficits (e.g., reading and spelling).[2,3]

AT can increase a child's self-reliance and sense of independence. Kids who struggle in school are often overly dependent on parents, siblings, friends, and teachers for help with assignments. By using AT, kids can experience success at working independently.

What Types of Learning Problems does Assistive Technology Address?

AT can address many types of learning difficulties. A student who has difficulty writing can compose a school report by dictating it and having it converted to text by special computer software. A child who struggles with math can use a hand-held calculator to keep score while playing a game with a friend. And a teenager with dyslexia may benefit from AT that will read aloud his employer's online training manual.

Assistive Technology for Kids with Learning Disabilities — An Overview

There are AT tools to help students who struggle with:

- Listening
- Math
- Organization and Memory
- Reading
- Writing

What Kinds of Assistive Technology Tools are Available?

The term assistive technology usually applies to computer hardware and software, as well as other electronic devices. AT tools that support kids with learning disabilities include:

- Abbreviation expanders
- Alternative keyboards
- Audio books and publications
- Electronic math worksheets
- Free-form database software
- Graphic organizers and outlining
- Information/data managers
- Optical character recognition
- Personal FM listening systems
- Portable word processors
- Proofreading programs
- Speech recognition programs
- Speech synthesizers/Screen readers
- Talking calculators
- Talking spell-checkers and electronic dictionaries
- Variable speed tape recorders
- Word prediction programs

Visit our AT Tools Database for more information:
http://www.schwablearning.org/ATtools

There are also many non-electronic tools available to help kids with LD. Examples include:

- pencil grips
- specialty paper
- highlighting pens and tape
- planners

Your Child's Profile

Here are several factors to consider when evaluating products for your child:

- What are **her specific needs and challenges**? In what academic skill areas does she struggle?
- What are **her strengths**? AT should utilize your child's abilities to help compensate for her disability.
- What is **her interest, skill, and experience in using technology**? In what **settings and situations** will she use the AT tool? AT can help a child with LD to function better at school as well as in other settings, such as home, work, social gatherings, and recreational events.

Other Technology Tools for Learning

There are other forms of technology that can help all students, including those with learning disabilities, improve their academic performance. These technologies differ somewhat from assistive technology but are worth mentioning.

Instructional software is used to develop specific academic skills. It differs from assistive technology in that it provides instruction rather than bypass strategies.

Universal Design for Learning (UDL) is a philosophy that encompasses learning models, methods, and products to enhance the educational experience of diverse learners (whether they have learning disabilities or not). In this approach, AT is often built into educational materials and can be customized to help students with disabilities be successful with the general curriculum. (UDL is not yet widely available to most students.)

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About the Authors

In her role as Writer/Editor for Schwab Learning, **Kristin Stanberry** provides information, insight, strategies, and support for parents whose children have LD and AD/HD. She combines a professional background developing consumer health and wellness publications with her personal experience of coaching family members with learning and behavior problems.

Marshall H. Raskind, Ph.D. is Director of Research and Special Projects at Schwab Learning. He is a frequent presenter at international learning disability conferences and is the author of numerous professional publications on learning disabilities. He is well-known for his research in assistive technology and longitudinal studies tracing LD across the lifespan.

A Parent's Guide to Assistive Technology

Assistive Technology Tools for a Variety of Learning Disabilities

Assistive technology (AT) tools exist to help individuals with many types of learning disabilities (LD). Following is a snapshot of the AT tools for five types of LD. For more detailed information, please see our AT Tools Database at http://www.schwablearning.org/ATtools.

AT for Listening

Certain assistive technology tools can help people who have difficulty processing and remembering spoken language. Such devices can be used in various settings (e.g., a class lecture, or a meeting with multiple speakers). Tools include tape recorders and assistive listening devices.

AT for Math

Assistive technology tools for math are designed to help people who struggle with computing, organizing, aligning, and copying math problems down on paper. With the help of visual and/or audio support, users can better set up and calculate basic math problems. Tools include talking calculators and electronic worksheets.

AT for Memory and Organization

Assistive technology tools can help a person plan, organize, and keep track of his calendar, schedule, task list, contact information, and miscellaneous notes. These tools allow him to manage, store, and retrieve such information with the help of special software and hand-held devices. Tools include personal data managers and free-form databases.

AT for Reading

There is a wide range of assistive technology tools available to help individuals who struggle with reading. While each type of tool works a little differently, all of these tools help by presenting text as speech. These tools help facilitate decoding, reading fluency, and comprehension. Tools include optical character recognition, speech synthesis, and alternative format books.

AT for Writing

There is a wide range of assistive technology tools available to help students who struggle with writing. Some of these tools help students circumvent the actual physical task of writing, while others facilitate proper spelling, punctuation, grammar, word usage, and organization. Tools include word processing programs, word prediction, speech synthesis, speech recognition, graphic organizers, spell checkers, abbreviation expansion, and alternative keyboards.

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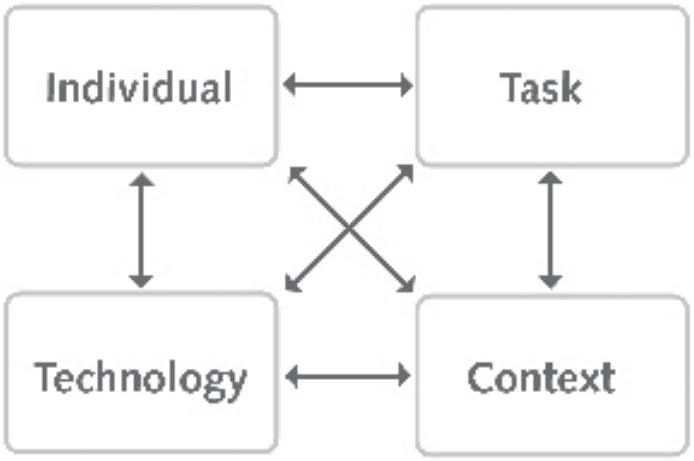
A Parent's Guide to Assistive Technology

Matching Assistive Technology Tools to Individual Needs

Assistive technology (AT) has the potential to enhance the quality of life for students with learning disabilities (LD) by providing them with a means to compensate for their difficulties, and highlight their abilities. Because students with learning problems have individual strengths, limitations, interests, and experiences, a technology tool that is helpful in one situation or setting may be of little use under different circumstances. As a result, **selecting the appropriate technology for a student with LD requires a careful analysis of the dynamic interaction between the individual, technology, task, and context.**



Selecting the appropriate technology for a student with LD requires careful analysis of the interaction between (a) the individual; (b) the specific tasks or functions to be performed; (c) the technology; and (d) the contexts or settings in which the technology will be used.

The AT Assessment Process

Whether an AT assessment is sought from a public school or private source, it is important for parents to understand the critical elements for conducting an AT assessment. Although some universities and organizations offer training and certificates in AT assessment, no licenses or credentials are required. As is the case with any profession, some practitioners are better qualified than others. Therefore, in addition to investigating the qualifications of the person conducting the assessment (e.g., education, training, experience) the more you know about the key components of a quality assessment, the greater the likelihood the appropriate "technology match" will be found for your child. Let's discuss the key elements of an AT evaluation. Also see our worksheet for matching AT tools to your child's needs on page 10.

The Individual Student

It is important to consider the student's strengths and weaknesses in regard to such areas as reading, writing/spelling, speaking, listening, math, memory, organization, and physical/motor ability. Examining these areas will help identify the specific areas of difficulty that need to be bypassed by using AT. Such examination will also help identify the child's areas of strength and ability which an AT product may "capitalize on" in order to work around a specific difficulty. For example, a student who struggles with reading but who has good listening skills might benefit from the use of audio books.

Matching Assistive Technology Tools to Individual Needs

You can gather information about a child's strengths and difficulties from several sources, including:

- school records
- prior diagnostic assessments (e.g., psycho-educational testing)
- interviews with individuals who are familiar with the student (e.g., parents, teachers, counselors, therapists, and tutors)

Additional data may be obtained by conducting formal assessments (e.g., standardized tests) and informal diagnostic techniques (e.g., observations) that focus on the academic skill areas. A student being evaluated for technology use should participate as a key member of the technology evaluation team and be interviewed about her understanding of the nature of her learning difficulties, as well as her strengths, talents, and special abilities.

> "The more you know about the components of a quality [AT] assessment, the greater the likelihood the appropriate technology match will be found for your child."

The potential effectiveness of any assistive technology tool also depends on the student's prior experience with, and interest in, using technology. Consideration should also be given to the student's technology experience and interest relative to the specific areas of difficulty (e.g., prior experience with/interest in a word processor to compensate for writing problems, or an OCR system for a reading difficulty), as well as the student's general working knowledge of technology, and overall interest and comfort level. Such information is needed to plan appropriate technology instruction and training.

The Task to be Performed

Another key factor in determining what AT tools might benefit a student is to pinpoint the specific task(s) she struggles with. For example, when it comes to writing an essay, she may construct sentences and tackle spelling with no problem, but she has trouble organizing and outlining the essay. In this case, a graphic organizer or outlining tool might help her plan and revise the "big picture" of her essay. In other words, not all AT tools for writing target the same skills or tasks. Knowing where a student struggles (and where she does not) are critical to choosing an appropriate AT tool.

Observation of Student, Technology, and Task in Action

Direct observation is the best technique for gathering information about a student's use of a technology tool to compensate for an area of difficulty. Only by observing the individual while she is actively using the technology tool to perform a specific task can it be determined that the tool is appropriate for her. It may be necessary to collaborate with AT professionals who are trained to observe students using technology. Some AT manufacturers' representatives will demonstrate specific technologies as well as provide opportunities for the student to try out specific products. (Keep in mind that a company representative may not be an objective observer of your child using the AT tool.) As the student experiments with a certain technology tool to perform tasks, the observer will want to note:

- the student's interest in and comfort level with the technology
- the student's ease in learning about and using the technology
- the degree to which the technology "taps" into the student's strengths
- the extent to which the student is able to use the technology independently and "troubleshoot" as necessary

- the effectiveness of the technology in compensating for specific difficulties as compared to alternative strategies

The Assistive Technology Tool

There are a number of factors specific to the technology itself that should be considered in the selection process. **Particular attention should be given to the technology's effectiveness in accomplishing its primary compensatory purpose.** For example, does a speech recognition system accurately convert the student's oral language to written text and improve the quality of the written product?

Contexts of Interaction

Students with learning difficulties must function in a variety of settings. Technology that is appropriate in one setting may be quite inappropriate in another. Therefore, it is important to consider the selection of technology relative to all settings where she is likely to use the tool (e.g., school, home, work, social, and recreational/leisure environments). The fact that a technology successfully compensates for a learning problem in one setting does not mean that it will be effective in another. For example, a speech recognition system may work quite effectively at home where the student can work alone. However, the use of the technology in a classroom setting, where there is considerable extraneous noise, may interfere with the technology's operation.

Similarly, the social appropriateness of AT may change from one setting to another. For instance, using a calculator to compensate for a math disability in a classroom setting may "blend in" nicely, without any negative social ramifications. However, using a calculator to keep score of a board game outside of school may appear inappropriate to peers.

The settings in which the technology will be used may change over time. For example, a high school student who uses a portable word processor to take notes in the classroom may later find the same technology useful in a college lecture hall or during meetings on the job. Therefore, some consideration should be given to projecting the appropriateness of the technology for the various settings where you expect it may be used over the course of one, two, three, or more years.

Assistive Technology: Rights under the Individuals with Disabilities Education Act (IDEA)

Under IDEA, AT must be considered for children with disabilities if it is needed to receive a "free and appropriate public education." It is the school district's responsibility to help select and acquire the technology, as well as provide training to the student in the use of the technology, and, at no cost to parents. This is done on a case-by-case basis. It is the IEP team (including parents and students) that makes a determination as to the necessity of AT. It is also the IEP team, (or any individual member) that initiates a request for an AT assessment. The assessment may be performed by school district personnel, or an outside consultant working in conjunction with the IEP team. Parents should know that at present, there are no standard policies, procedures, or practices among school districts for conducting AT assessments. This is all the more reason for parents to be informed as to the critical elements in conducting a quality AT assessment.

Matching Assistive Technology Tools to Individual Needs

Assessment for Today and Tomorrow

Selecting an appropriate AT tool for a student requires parents, educators, and other professionals to take a comprehensive view, carefully analyzing the interaction between the student, the technology, the tasks to be performed, and the settings where it will be used. Keep in mind that AT assessment is an on-going process, and it is critical to periodically re-evaluate the "match" even after a technology tool has been selected. This will help ensure that the student receives the maximum benefit from AT and is able to reach her full potential.

This article is based on the *Functional Evaluation for Assistive Technology* (Raskind & Bryant, 2002).

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About the Author

Marshall H. Raskind, Ph.D. is Director of Research and Special Projects at Schwab Learning. He is a frequent presenter at international learning disability conferences and is the author of numerous professional publications on learning disabilities. He is well-known for his research in assistive technology and longitudinal studies tracing LD across the lifespan.

A Parent's Guide to Assistive Technology

Selecting AT Tools to Meet Your Child's Needs: A Parent's Worksheet

This worksheet is designed to guide you in identifying AT tools to help your child bypass or "work around" learning difficulties. Follow the steps below to work through the selection and experimentation process. You may want to make a copy of this worksheet for each AT tool you are considering.
Note: This worksheet is not intended to serve as a formal assessment for AT.

Step 1: Consider Your Child's Strengths and Limitations

The first step is to consider your child's strengths and limitations. This will prepare you to identify AT tools that may help your child bypass difficulties while playing to strengths. Place a check in the box that best describes your child's ability in each of the following areas. (You will fill in the "Possible AT Tools" column after you review Step 2.)

Skill Area	Weak	Average	Strong	Possible AT Tools
Listening				
Pays attention to speaker for appropriate time span				
Distinguishes between important and unimportant information				
Understands basic oral instructions				
Understands rapid speech				
Reading				
Reads words accurately				
Understands meaning of individual words				
Comprehends sentences, paragraphs, etc.				
Reads with speed/fluency				

Skill Area	Weak	Average	Strong	Possible AT Tools
Writing				
Expresses self clearly in writing				
Spells correctly				
Uses correct grammar				
Uses appropriate vocabulary				
Knows punctuation/capitalization rules				
Edits/proofreads well				
Writes neatly with little difficulty				
Math				
Understands basic math concepts (e.g., counting, number symbols)				
Calculates basic arithmetic problems				
Calculates quickly				
Can write down math problems in a neat, organized manner				
Memory				
Has long-term recall of information				
Has short-term recall of information				
Follows directions in order				
Organization				
Organizes personal and work time				
Organizes personal work space				
Makes plans to accomplish tasks				

Selecting Assistive Technology Tools to Meet Your Child's Needs Worksheet

Step 2: Review Possible Assistive Technology Tools

Review the AT database at www.schwablearning.org/ATtools for detailed descriptions of AT tools. In the list below, place a check mark next to any tools that seem appropriate for your child. Then add those tool types to the "Possible AT Tools" column in the chart above.

Reading
- ❑ OCR/Speech Synthesis
- ❑ Speech Synthesis
- ❑ Alternative format books (e.g., tape, CD)

Writing
- ❑ Word Processor
- ❑ Word Prediction
- ❑ Speech Synthesis
- ❑ Speech Recognition
- ❑ Graphic Organizer
- ❑ Spell Checker
- ❑ Abbreviation Expansion
- ❑ Alternative Keyboard

Math
- ❑ Talking Calculator
- ❑ Electronic Worksheets

Memory
- ❑ Personal Data Manager
- ❑ Tape Recorder
- ❑ Free-form Database

Organization
- ❑ Personal Data Manager
- ❑ Tape Recorder
- ❑ Free-form Database

Listening
- ❑ Assistive Listening Device
- ❑ Tape Recorder

Step 3: Observe Your Child Using the AT Tool

AT Tool Reviewed: _____

Observe your child experimenting with the AT tool to perform the task(s) that are difficult. **Compare this to the performance of the same task using no technology or using a different strategy**. Circle the number that best describes the apparent match between your child, the task, and the AT tool:

The technology:			
improved accuracy/quality	Not at all 1	Somewhat 2	A lot 3
increased speed/efficiency	Not at all 1	Somewhat 2	A lot 3
compensated for her difficulty	Not at all 1	Somewhat 2	A lot 3
tapped into her strengths	Not at all 1	Somewhat 2	A lot 3
was easy for her to learn	Very hard 1	Somewhat 2	Very easy 3
was easy for her to use	Very hard 1	Somewhat 2	Very easy 3

Selecting Assistive Technology Tools to Meet Your Child's Needs Worksheet

Step 4: Consider the Setting and Context for the AT Tool Usage

AT Tool Reviewed: _____

For each setting listed below, answer "yes" or "no" depending on where your child will need/want to use the AT tool.

Setting	Compatible with existing technology		Appropriate space available		Appropriate furniture available		On-site support (e.g., adult familiar with AT)	
	YES	NO	YES	NO	YES	YES	YES	NO
Classroom								
Home								
Other								

Step 5: Review Characteristics of the AT Tool

AT Tool Reviewed: _____

Circle the number that best describes each characteristic of the AT tool.

Reliability/Dependability	Poor 1	Okay 2	Very good 3
Compatibility with existing technologies (at home or school)	Not at all Compatible 1	Somewhat compatible 2	Very compatible 3
Ease of learning and operating	Very hard 1	Okay 2	Very easy 3
Quality of visual display	Low 1	Okay 2	Very High 3
Quality of auditory output	Low 1	Okay 2	Very High 3
Level of technical support (via phone, Web, in-person)	Low 1	Okay 2	Very High 3

This worksheet is based on the *Functional Evaluation for Assistive Technology* (Raskind & Bryant, 2002).

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Consumer Tips for Evaluating Assistive Technology Products

There are many assistive technology (AT) products available, and new tools are frequently released into the market. The first step to narrowing down your search for appropriate AT tools is to analyze several factors: your child's individual needs, the particular task(s) she needs to accomplish, the AT tools that address her challenges, and the settings where she will use the technology. Once you have identified these key factors, you will want to be a savvy consumer regarding the quality, usability, and reliability of the AT tools themselves. This article will provide tips for doing exactly that.

Using the AT Tool in Different Settings

AT can help a child with a learning disability to function better at school as well as in other settings, such as home, work, social gatherings, and recreational events. Here are some questions to consider:

> "As with any device or piece of equipment, you will want to know how user-friendly and reliable an AT tool is before you invest in it."

- **In what settings will the AT tool be used (e.g., home, school, work, and/or social settings)?**
  The right technology in one setting may be entirely wrong in another. Think about where she'll use it, how it will be stored, and if you have the right furniture and electrical/electronic support for it. If your child will use the AT tool at school, the same considerations would apply to the classroom.

- **If the AT tool will be used in more than one place, how portable is it?**
  Fortunately, hand-held and pocket-sized tools often are as useful as larger systems. A pocket-sized spell checker may work just as well as a computer with a spell check program, and it's much easier to carry around.

Product Usability and Reliability

As with any device or piece of equipment, you will want to know how user-friendly and reliable an AT tool is before you invest in it. Here are some questions to ask about a product's reliability, usability, and quality:

- **How easy is it to learn about and operate?**
  How user-friendly is the AT tool? Instructions should be brief and easy to read. Commands for operating should be clear and simple. Directions should include a logical, step-by-step process for setting up and installing the technology, basic and advanced operating instructions, and what to do when things go wrong.

- **What is the quality of its visual display and/or auditory output (if applicable)?**
  Make sure the visual display and audio output are clear and easy for your child to see or hear.

Consumer Tips for Evaluating Assistive Technology Products

- **How reliable is it?**
  Ask past and present users how well the product holds up. Does it always seem to be breaking down or need frequent repairs? You may find it helpful to have a local technical support system comprised of people who are familiar with your child's AT tool or a similar one. This might include other parents, local support groups, teachers, technical support staff at your child's school, and tutors. An Internet search of customer reviews may also help answer your questions.
- **Does it need to work with other technologies?**
  Make sure the AT product is compatible with related technologies. For example, software designed to work on a personal computer may not operate on a Mac at home or in the classroom. Also be sure any accessory items, such as a microphone to use with a computer, are available.
- **What technical support is available?**
  Even with the best instructions, you might need technical support. Select products that offer online and toll-free support (1-800 numbers), readily available field representatives, and convenient service locations. Also check the length, cost, and limitations of product warranties.

Try Before You Buy

Before you select an AT tool, take time to learn all you can about the products available. Have your child try out any AT tool or device you're considering purchasing. She's the one who's going to use — or not use — the technology. The "perfect" item can't help her if she refuses to use it! Here is a list of resources to help you in the selection process:

Alliance for Technology Access (ATA) can help you find the nearest place to preview software in your area. To keep AT costs down, use readily available resources such as those listed below to access the technology or just to try it out. http://www.ataccess.org/

Community

Community Technology Center's Network (CTCNet) is composed of independent, not-for-profit community-based technology centers providing free or low cost access to computers and related technology. http://www.ctcnet.org/

Some **community colleges** have assistive technology centers where you and your child may be able to try out different types of AT tools (often geared for older students).

Schools

Your child's school may have assistive technology tools available to try out. Even if your child's school does not provide and pay for your child's AT, don't hesitate to use them as a resource before you purchase AT tools for your child.

Technology Companies/Manufacturers

Some software publishers have websites that offer demonstration versions. Other publishers offer the "fully operable" program for a thirty-day preview. Check to see if free trial offers are available on the products you're interested in.

Conferences

Consumer Tips for Evaluating Assistive Technology Products

Several assistive technology groups offer conferences where attendees can learn about — and try out — various AT tools:

Technology, Reading, and Learning Difficulties
http://www.trld.com/

California State University, Northridge Center on Disabilities' Annual International Technology and Persons with Disabilities Conference (for all disabilities)
http://www.csun.edu/cod/conf/index.htm

Closing the Gap (for all disabilities)
http://www.closingthegap.com/

You may also visit AT manufacturers when they exhibit at **conferences hosted by learning disability organizations** (e.g., Learning Disabilities Association of America and the International Dyslexia Association).

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About the Author

Marshall H. Raskind, Ph.D. and the editorial team of SchwabLearning.org.
Dr. Raskind is Director of Research and Special Projects at Schwab Learning. He is a frequent presenter at international learning disability conferences and is the author of numerous professional publications on learning disabilities. He is well-known for his research in assistive technology and longitudinal studies tracing LD across the lifespan.

A Parent's Guide to Assistive Technology

Resources & References

Visit our AT Tools Database for more information:
http://www.schwablearning.org/ATtools

Assistive Technology for Kids with Learning Disabilities — An Overview

Related Articles on SchwabLearning.org

Accommodations and Modifications: Adjusting the Classroom Experience
http://www.schwablearning.org/articles.asp?r=306

Evaluating Educational Software for Children with LD: What Parents Need to Know
http://www.schwablearning.org/articles.asp?r=785

Low Tech Writing Tools
http://www.schwablearning.org/articles.asp?r=442

Research Trends: Reading Machines for Students with LD
http://www.schwablearning.org/articles.asp?r=984

Universal Design for Learning — Improved Access for All
http://www.schwablearning.org/articles.asp?r=490

Other Resources

Websites
Recording for the Blind and Dyslexic website
www.rfbd.org

Georgia Tools for Life:
Learning Disabilities & Assistive Technology
www.gatfl.org/ldguide/at.htm

Alliance for Technology Access website
http://www.ataccess.org/

Community Technology Center's Network (CTCNet) website
www.ctcnet.org/

Family Center on Technology and Disability website
www.fctd.info/

Rehabilitation Engineering & Assistive Tech. Society of No. America (RESNA)
Technical Assistance Project
http://www.resna.org/taproject/index.html

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2. Higgins, E. & Raskind, M. "Speaking to Read: The Effects of Continuous vs. Discrete Speech Recognition Systems on the Reading and Spelling of Children with Learning Disabilities." *Journal of Special Education Technology*, 15 (1).

3. Raskind, M. & Higgins, E. "Speaking to read: The effects of speech recognition technology on the reading and spelling performance of children with learning disabilities." *Annals of Dyslexia,* 49.

Matching Assistive Technology Tools to Individual Needs

Other Resources

Websites
National Center for Learning Disabilities:
Online Chat Transcript: Making Technology Part of Your Back-to-School Planning
http://www.ldtalk.org/transcripts/transcript_081705.html

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Consumer Tips for Evaluating Assistive Technology Products

Related Articles on SchwabLearning.org

Quiz: Understanding Assistive Technology (AT)
http://www.schwablearning.org/quiz.asp?q=6

Other Resources

Websites
LD OnLine:
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http://www.ldonline.org/article/16765

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